SHLOK SHIVARAM IYER SEM 3 SECTION E BATCH:2

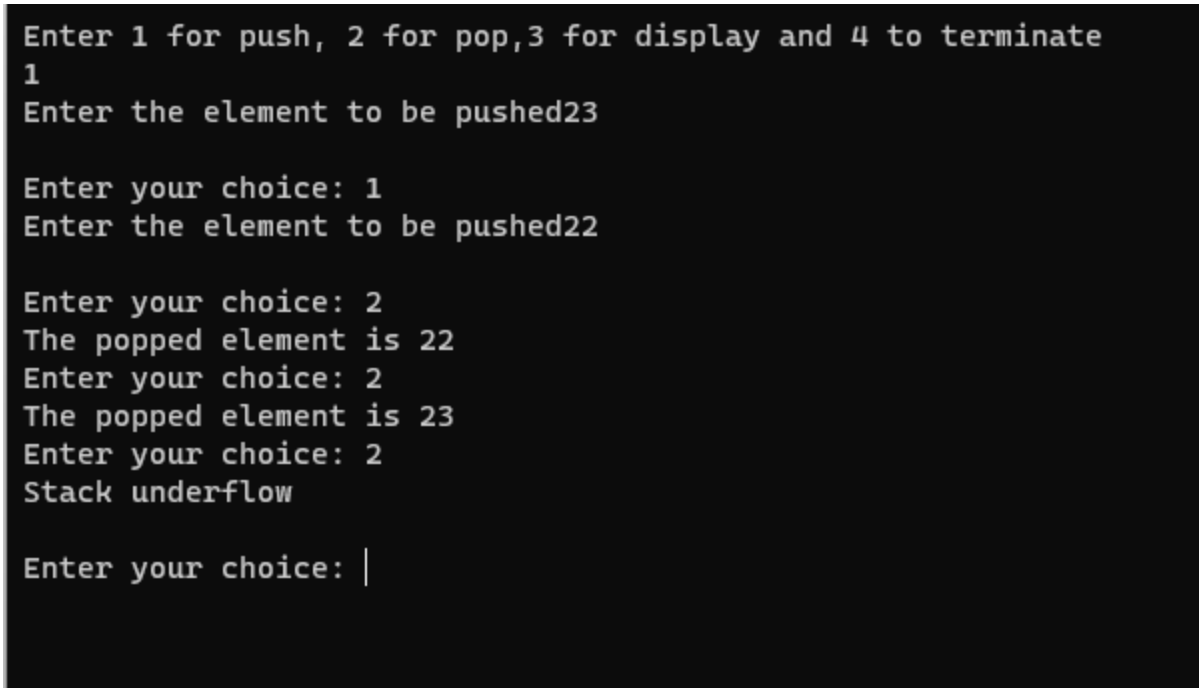
```
#define N 5
#include <stdio.h>
#include <stdlib.h>
int stack[N];
int top=-1;
void push()
{   int x;
    if(top==N)
    {
        printf("Stack overflow");

    }
    else
    {
       printf("Enter the element to be pushed");
       scanf("%d",&x);
       top++;
       stack[top]=x;
    }
}
void pop()
{

    int item;
    if(top==-1)
    {
        printf("Stack underflow\n");
    }
    else
    {
        printf("The popped element is %d",stack[top]);
        top--;
    }
}
void display()
{   int i;
    for ( i=N;i>=0;i--)
    {
        printf("%d\n",stack[i]);
    }
}
void main()
{
```

```
    int choice;
    printf("Enter 1 for push, 2 for pop,3 for display and 4 to terminate\n");
    scanf("%d",&choice);
    while(1)
    {

        switch(choice)
        {

        case 1:
            push();
            break;
        case 2:
            pop();
            break;
        case 3:
            display();
            break;
        case 4:
            exit(0);
        }
        printf("\nEnter your choice: ");
        scanf("%d",&choice);
    }

}
```

Output:

```
Enter 1 for push, 2 for pop,3 for display and 4 to terminate
1
Enter the element to be pushed23

Enter your choice: 1
Enter the element to be pushed24

Enter your choice: 1
Enter the element to be pushed25

Enter your choice: 1
Enter the element to be pushed33

Enter your choice: 1
Enter the element to be pushed44

Enter your choice: 3
44
33
25
24
23

Enter your choice: 1
Stack overflow
Enter your choice:
```

Output for display,push and overflow



Output for pop and underflow